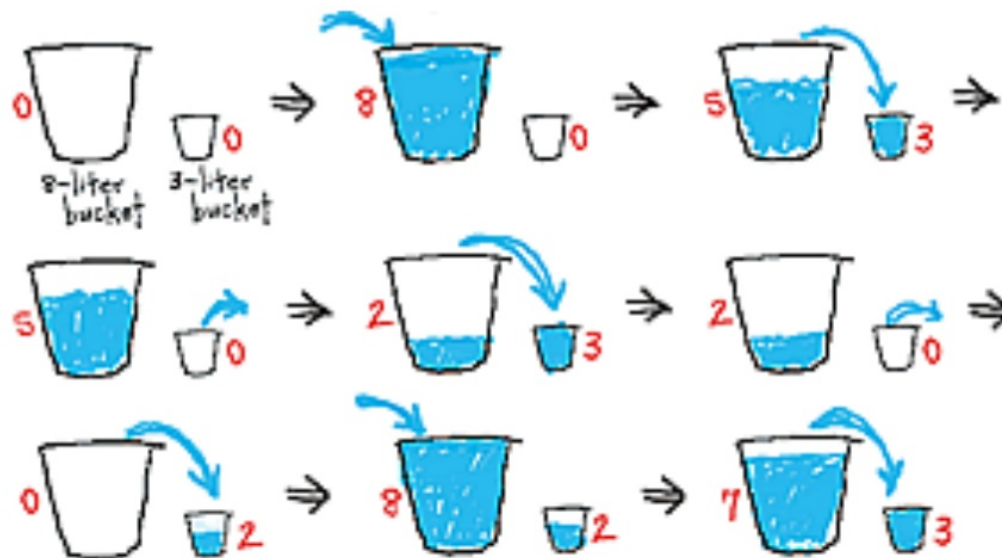


EXAMPLE A

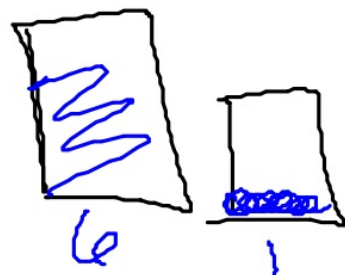
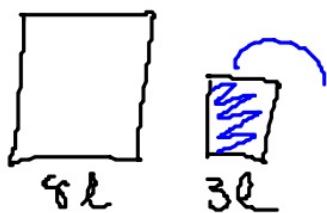
Allyndreth needs to mix some lawn fertilizer with 7 liters of water. She has two buckets that hold exactly 3 liters and 8 liters, respectively. Describe or illustrate a procedure that will give exactly 7 liters of water in the 8-liter bucket.

Solution

There is more than one solution to this problem. The picture sequence below shows one solution.



Your solutions



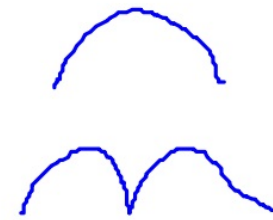
sketch

Camel-Desert Problem

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Dromedary

Bactrian

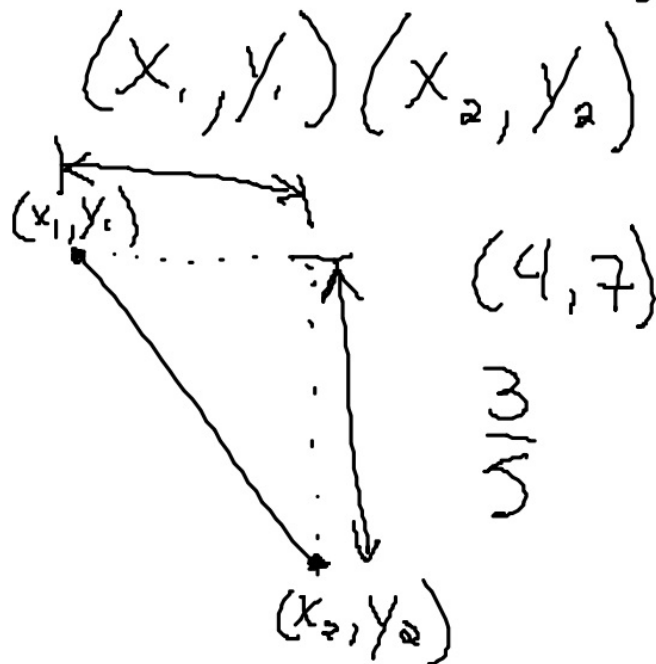


EXAMPLE B

A line passes through the point $(4, 7)$ and has slope $\frac{3}{5}$. Find another point on the same line.

Slope - how steep the line is (how fast it increases or decreases)

$$\text{slope} = \frac{\text{height}}{\text{length}} = \frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x}$$



$$\frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{7 - y}{4 - x} = \frac{3}{5}$$

$$\frac{y - 7}{x - 4} = \frac{3}{5}$$

$$(-1, 4)$$

$$4$$

$$-1$$

$$10$$

$$9$$

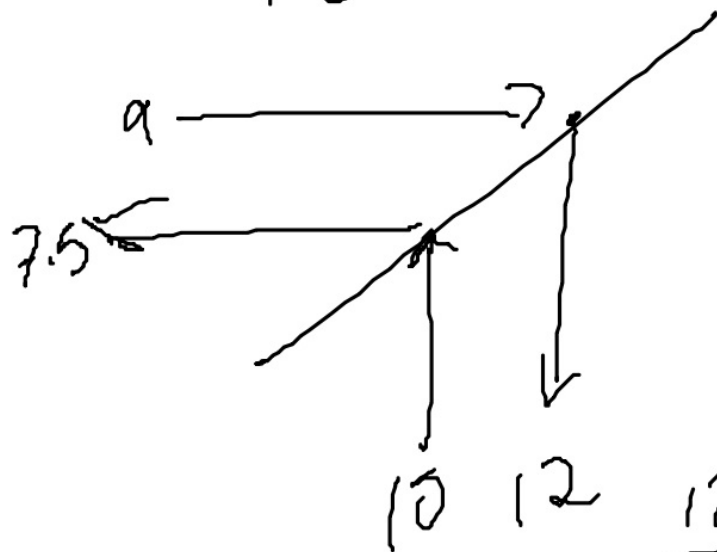
$$(9, 10)$$

pp. 4+5
1-4, 6

1 a) Starting with two empty buckets, 10L + 7L,
we need to finish w/ 4L in the 10L
bucket.

4 a) $\frac{12}{16} = \frac{9}{12}$ solved graphically

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$$b) \frac{12}{16} = \frac{7.5}{10}$$

$$\frac{12}{16} = \frac{3}{4}$$

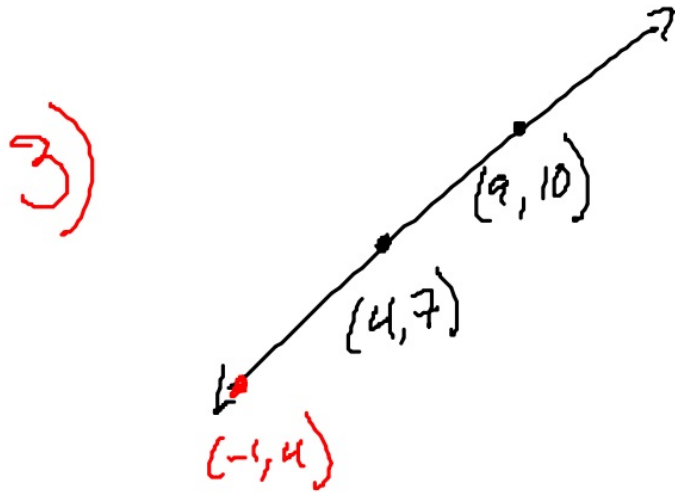
$$\frac{9}{12}$$

$$\frac{12}{16} = \frac{6}{8} = \frac{3}{4} \quad \frac{3}{4} = \frac{7.5}{10}$$

1 a) $(2, 5)(7, 10)$ $\frac{5 - 10}{2 - 7} = \frac{-5}{-5} = 1$
 (x, y)

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2 a) $(0, 4)(5, 2)$ $\frac{4 - 2}{0 - 5} = \frac{2}{-5} = -\frac{2}{5}$



Second day $2x$ calls answered on first day,
+ 3 dozen (x)

Both days = 75 dozen

$$x + 2x + 3 = 75$$

$- 3 \quad - 3$

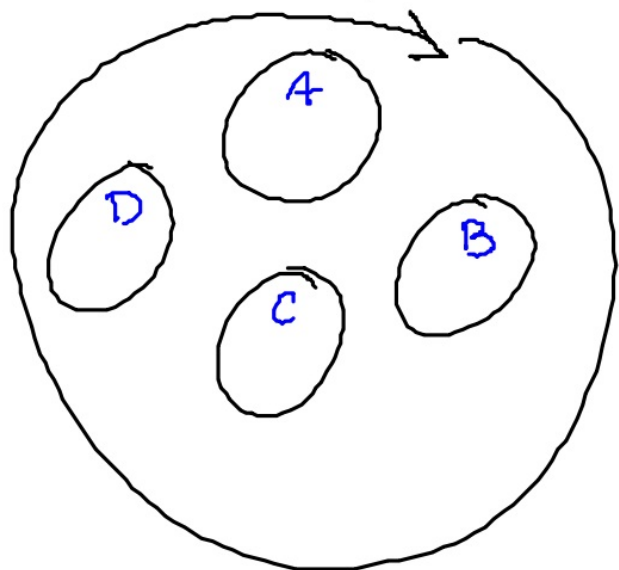
$$\begin{array}{r} 24 \\ 48 \\ + 3 \\ \hline 75 \end{array}$$

$$| x + 2x = 72$$

$$\begin{array}{r} 3x = 72 \\ \hline 3 \end{array}$$

$$x = 24 \text{ dozen calls}$$

Ex. A 29 pigs 4 pens \hookrightarrow each pen closer to 10 than previous pen



A	5
B	7
C	8
D	9
<hr/>	
29	

5
3
2 12
1 A ∨ B

$$|C - 10| < 3$$